

Forest Edge Community (FEC) Survey and Games

Contact: Maarten Voors, Wageningen University

maarten.voors@wur.nl

(variables blinded or omitted to protect identity of respondents)

PROTOCOLS

Informed Consent

Go through informed consent.

If you have any questions or concerns, let me know. To be clear, you are free to opt out of this research study if you would like to. Are you interested in participating in this study?

*Hand them the **Informed Consent Information Sheet**.*

Please contact Mr. Turley or the University of Chicago if you have any concerns after we leave.

Script for the Ultimatum Game

Thank you for taking part in this game. You will play a game where you are matched with the one other member of your community. In this game you may earn some money.

Half of you will be chosen by chance to be 'senders', and half of you will be chosen by chance to be 'receivers'. Each sender in the village will be matched to one receiver in the village.

If you are chosen to be a sender, we will give you 5.000 Le. You must then decide how much of that 5.000 Le to offer to the receiver. You can offer 0 Le, 5.000 Le, or any amount in between. Once you make your offer, we will tell the receiver the size of the offer they got from their sender. The receiver then has a choice. He can accept the offer or reject the offer. If the receiver accepts the offer, the receiver wins the amount of money offered and the sender keeps whatever they did not offer. If the receiver rejects the offer, both players get 0 Leones.

Let's do an example. Suppose the sender offers 2.000 Le. The receiver can accept the 2.000 Le. In this case, the sender wins 2.000 Le and the receiver wins 3.000 Le. Or the receiver can reject the offer, and both players win 0 Le. Let's do another example. Suppose the sender offers 3.000 Le. The receiver can accept the 3.000 Le. In this case, the sender wins 2.000 Le and the receiver wins 3.000 Le. Or the receiver can reject the offer, and both players win 0 Le.

Please line up by your household number. We will talk with each of you individually to let you know if you are a sender or a receiver, and to find out what offers you want to make. When everyone has played, we will tell you individually how much money you won, and we will pay you for all the games today.

*Use the appropriate scripts below according to the assignment on the **Ultimatum Game Script Chart**. Use the household name list to prepare the scripts so that you can tell the individuals the correct names of players they are matched with. When that is ready, meet with each household representative individually and read the assigned script to them.*

*Record all sender and receiver decisions on the **Ultimatum Game Record Sheet**. When everyone has played the game, calculate all their winnings. Meet with all household representatives individually to pay them what they won in the coordination game, the public goods game, and the ultimatum game.*

Script for the Public Goods Game

We will play a game. You will play against other people in your village. You will be in groups of 3 people, but we will not tell you who in the village is in your group.

In this game you have five stones in your hand. You must decide what to do with these stones. You can keep them for yourself, or you can share them. If you keep them, they are worth 1.000 Leones to you, but the people in your group get nothing. If you share them, you get 500 Leones for each one, and everyone in your group gets 500 Leones for each one as well.

How many you share is a secret, and how much you win is a secret also. Don't tell people how many stones you are sharing.

We will play this game five times. Each time, you can change how many stones you share. It is up to you. When we are done, we will draw numbers out of a bag. We will pay you the amount of money you won in the round number that we draw out of the hat.

Let's do an example. There are 3 people in the group. Let's say everyone keeps 4 stones and shares 1. Each person wins 4.000 Leones for the stones they kept. Then, there are 3 shared stones. Everyone wins 500 Leones for each of those stones, so everyone gets 1.500 from the shared stones. In total, each player wins 5.500 Leones. As an example, let's say that in the next round, one player decides to keep all their stones. Now there are two shared stones, so every player gets 1.000 Leones from the shared stones. The players who kept 4 stones get 5.000 total, but the player who kept all his stones wins 6.000 Leones.

Let's play. Everyone pick up 5 small stones and keep them in your hand. Decide how many you want to share, and put them in your right hand. We will walk around. Show us how many stones you want to share. We will tell you at the end how much money you have won.

*Walk around and record how many stones are in each person's right hand. Go back to the **Public Goods Game Record Sheet** and use the chart to record how much money each player won. Go back around and whisper this amount into each individual's ear.*

Now we will do the same thing for round 2. Please decide again how many stones you will share with the group. This could be the same as last time, or you can change the number. Remember that you win 1.000 Leones for every stone you keep, plus 500 Leones for every stone you share, plus 500 Leones for every stone the people in your group share. You get 0 Leones for stones that your group members keep for themselves.

Walk around and record how many stones are in each person's right hand. Go back to the form and use the chart to record how much money each player won. Go back around and whisper this amount into each individual's ear.

Alright. Now we will do the same thing again. This is round 3.

Repeat the process.

Alright. Now we will do the same thing again. This is round 4.

Repeat the process.

Alright. Now we will do the same thing again. This is round 5, the last round.

Repeat the process.

Thank you for playing.

Draw a number between 1 and 5 out of a bag.

We will pay you what you won in round _____. We will pay the money after we are all done here today.

Scripts for Livelihood Support Choice

After completing the social network survey, use the appropriate script to read for the specific household number you are working with.

Greetings. Thank you for coming with me. Please have a seat. As you know Gola Forest Program is here to implement a project in your village using the Forest Edge Community Fund. GFP would like to use this fund to increase your consumption, investments and production. You can also give part of the money to a community project if you like.

GFP wants to ask each household representative individually how they want to use the money. The total amount of money available for each household is 80.000 Le. The benefits you will receive from this project will be in the form of goods. We have created a menu of goods you can choose from.

First we would like to ask you how much money you would like to contribute to the community project. We will organize a meeting later to determine which community project will be implemented.

Please tell me: out of 80.000 Le, how much do you want to spend on private goods and how much do you want to contribute to a community project?

Informed Consent

Gola Forest Program Household and Community Surveys
John List

My name is _____. I am a research associate hired by Wageningen University and the University of Chicago. I am here to conduct a study that will look at livelihoods, forest use, and families in villages around Gola Forest.

Before we begin, I would like to take a minute to explain why I am inviting you to participate and what I will be doing with the information you provide to me. Please stop me at any time if you have any questions. After I've told you a bit more about my project, you can decide whether or not you would like to participate.

This research is being conducted by researchers from the Department of Economics at Wageningen University and at the University of Chicago. We will be interviewing 1500 households in 55 villages near Gola Forest. The researchers will use the information we collect in articles that might be published, as well as in academic presentations.

Participation should take about half a day. Participation is on a purely voluntary basis. You will be asked to answer questions about your friends and family in the village. You will also be asked to choose how to spend some money on goods that will help you and your community. There are minimal risks to you from answering these questions. The information we collect today is private and confidential. We will not share any details from the survey about your friends or family with anyone besides the research team from Wageningen University and the University of Chicago. These surveys will go to a secure location at Wageningen University. We will never let anyone in your village know which goods you selected, unless we tell you first that we will do so. We must share your choice of goods with the Gola Forest Program so that they can purchase these goods and deliver them to you in the next few months. These goods are a direct benefit of participating in this project.

If at any time and for any reason, you would prefer not to answer any questions, please feel free not to. If at any time you would like to stop participating, please tell me. We can take a break, stop and continue at a later date, or stop altogether. You will not be penalized in any way for deciding to stop participation at any time.

If you have questions, you are free to ask them now. If you have questions later, you may contact me by calling the research supervisor, Esther Richards, at 078-446-413. You may also contact the researchers at the University of Chicago. Ty Turley is the student researcher responsible for this project, and he can be reached in the following ways:

Ty Turley
Department of Economics
1126 E. 59th St.
Chicago, IL 60615
USA
+1-773-702-9016
ty.econ.research@gmail.com

If you have any questions about your rights as a participant in this research, you can contact the following office at the University of Chicago:

Social & Behavioral Sciences Institutional Review Board
University of Chicago
5835 South Kimbark - Judd 333
Chicago, IL 60637
Phone: (773) 834-7835
Fax: (773) 834-8700
Email: sbsirbwise@listhost.uchicago.edu

NAME INTERVIEWER: _____ INTERVIEWER CODE | | | | |

NAME OF VILLAGE _____ VILLAGE CODE: | | | | |

NAME OF RESPONDENT: _____ HOUSEHOLD CODE: | | | | |

Survey

1. Age:		2. Sex:	Male	Female					
3. Are you the head of your household? If not, you are his:		Household head	Wife	Son	Daughter	Father	Mother		
		Other, specify: _____							
4. Number of people in your household:				5. Family could have a chief:		Yes	No		
6. Number of years your family lived here:									
7. Ethnic group:		Mende	Gola	Fula	Temne	Loko	Madingo	Kono	Vai
		Other: _____							
8. Religion:		Christian	Muslim	Other: _____					
9. How satisfied are you with the Gola Forest Program?		Very Satisfied	Satisfied	Don't Care	Unsatisfied	Very Unsatisfied			
10. Comments									

Your Social Network

Think of all the households in your village. Out of these people, we want to know how you are connected to them.

	Write all the household numbers from the Village Households Master List that apply:
11. Parents of you and your spouse	
12. Brothers and sisters of you and your spouse	
13. Children of you and your spouse	
14. Uncles and aunts of you and your spouse	
15. Nieces and nephews of you and your spouse	
16. Which households do you farm with?	
17. Which households do you eat with?	
18. Which households have you borrowed money from?	
19. Which households have borrowed money from you?	
20. Which households would you never lend money to?	

NAME INTERVIEWER: _____ INTERVIEWER CODE | | | | |

NAME OF VILLAGE _____ VILLAGE CODE: | | | | |

NAME OF RESPONDENT: _____ HOUSEHOLD CODE: | | | | |

Research Games

Coordination Questions: These questions are from the research team, and not from the Gola Forest Program. For each of these questions, we will ask everyone in your village the same thing. If the answer you give is the same as the most common answer in your village, you will win 500 Leones. If you win all the questions, you would get 3.000 Leones total. For example, we could ask, "What color is the sky?" If you say blue, and 14 out of 16 people in your village also say blue, you would win 500 Leones.

Question	Your Answer	Most Common	Win
1. What is the most important crop in your village?			
2. Of all things that people sell here as petty traders, what is the best and most profitable?			
3. What is your most important community bylaw?			
4. Is preserving the Gola Forest "very important", "important", or "not important"?			
5. Who is the best person in the village to borrow rice from?			
6. Who in the village cares the most about preserving Gola Forest and following forest rules?			

Risk Questions

For each of these choices, pick which option you would rather have. We will roll a dice. Whatever number comes up, we will pay you for that choice.

Circle the options that the person chooses. Roll the dice and pay them for the selected choice. If you roll a 6, roll again.

	Option A Win for certain:	Option B: Flip a coin	
		If HEADS:	If TAILS:
Choice 1	1.000	0	or 6.000
Choice 2	2.000	0	or 6.000
Choice 3	3.000	0	or 6.000
Choice 4	4.000	0	or 6.000
Choice 5	5.000	0	or 6.000

Time Preference Questions

For each of these choices, pick which option you would rather have. We won't actually pay you for these choices, but we are interested in which one you would prefer.

Circle the options that each person chooses.

	Option A: Today	Option B: After Harvest
Choice 1	100.000	100.000
Choice 2	100.000	120.000
Choice 3	100.000	140.000
Choice 4	100.000	160.000
Choice 5	100.000	180.000
Choice 6	100.000	200.000
Choice 7	100.000	240.000
Choice 8	100.000	300.000

Ultimatum Game

Prepare in Advance	Send or Receive:	Sender	Receiver	If Receiver, Offer Received:	Leones	
	Treatment:	1	2	3	4	Household Name (if needed in script 2,3,4):
	If Sender, Offer Made:	Leones		If Receiver:	Accept Reject	

NAME INTERVIEWER: _____ or CODE | | | | |

NAME OF VILLAGE _____ VILLAGE CODE: | | | |

NAME OF RESPONDENT: _____ HOUSEHOLD CODE: | | | |

SCRIPT NUMBER | | |

Livelihood Support Choice Step 1 Record Sheet

Type of Good	Allocation
Private goods	
Community project	
Total:	80.000 Le

NAME OF VILLAGE _____

VILLAGE CODE: _____

NAME OF RESPONDENT: _____

HOUSEHOLD CODE: _____

SCRIPT NUMBER _____

Livelihood Support Choice Step 2 Record Sheet

Amount committed to private goods: _____ Le

Good	Price	Quantity	Total cost per item
Palm Oil, 1 pint	1.200		
Salt, 1 butter cup	500		
Sugar, 1 butter cup	1.500		
Maggi, 1 pkt	12.500		
Mampo (Sandege), pkt	6.500		
Rice, 1 buttercup	800		
Hoe (small), 1 pc	5.000		
Hoe (big), 1 pc	15.000		
Brushing knife, 1 pc	5.000		
Upland cutlass, 1 pc	10.000		
Upland seed rice, 1 bushel	40.000		
Pa Kamp. Special upland seed rice from North SL, 4 month variety, for poor soils, 5 kg	10.000		
IVS seed rice, 1 bushel	60.000		
Cassava sticks (improved), bundle (30 pc)	10.000		
Coffee, 1 seedling	2.500		
Cacao, 1 seedling	2.500		
Pineapple, 1 sucker	1.500		
Oil palm (improved), 1 seedling	10.000		
Total Cost:			_____ Le <i>(must not exceed 80.000 – public good contribution)</i>

Signature Project Assistant

Signature Respondent (or thumbprint)

NAME OF VILLAGE _____

VILLAGE CODE:

Master Household List

Household Code	Representative Name
001	
002	
003	
004	
005	
006	
007	
008	
009	
010	
011	
012	
013	
014	
015	
016	
017	
018	
019	
020	
021	
022	
023	
024	
025	
026	
027	
028	
029	
030	

Household Code	Representative Name
031	
032	
033	
034	
035	
036	
037	
038	
039	
040	
041	
042	
043	
044	
045	
046	
047	
048	
049	
050	
051	
052	
053	
054	
055	
056	
057	
058	
059	
060	

NAME OF VILLAGE _____

VILLAGE CODE: **Ultimatum Game Script Chart***Use the chart below to assign Ultimatum Game scripts and treatments to all households. If*

Number of Households in Village	1-S : 1-R	2-S : 2-R	3-S : 3-R	4-S : 4-R
7	4:?	1:5	2:6	3:7
8	1:5	2:6	3:7	4:8
9	1:6	2:7	3:8, 5:?	4:9
10	1:6	2:7	3:8	4:9, 5:10
11	1:7, 6:?	2:8	3:9, 5:11	4:10
12	1:7, 6:12	2:8, 5:11	3:9	4:10
13	1:8	2:9, 6:13	3:10, 7:?	4:11, 5:12
14	1:8, 6:13	2:9	3:10, 7:14	4:11, 5:12
15	1:9, 8:?	2:10, 5:13	3:11, 6:14	4:12, 7:15
16	1:9, 5:13	2:10, 6:14	3:11, 7:15	4:12, 8:16
17	1:10, 5:14	2:11, 6:15	3:12, 7:16, 9:?	4:13, 8:17
18	1:10, 5:14	2:11, 6:15, 9:18	3:12, 7:16	4:13, 8:17
19	1:11, 5:15, 10:?	2:12, 6:16	3:13, 7:17	4:14, 8:18, 9:19
20	1:11, 5:15, 9:19	2:12, 6:16	3:13, 7:17, 10:20	4:14, 8:18
21	1:12, 5:16	2:13, 6:17, 9:20	3:14, 7:18, 11:?	4:15, 8:19, 10:21
22	1:12, 5:16, 9:20	2:13, 6:17, 10:21	3:14, 7:18, 11:22	4:15, 8:19
23	1:13, 5:17, 12:?	2:14, 6:18, 10:22	3:15, 7:19, 11:23	4:16, 8:20, 9:21
24	1:13, 5:17, 9:21	2:14, 6:18, 10:22	3:15, 7:19, 11:23	4:16, 8:20, 12:24
25	1:14, 5:18, 9:22	2:15, 6:19, 10:23	3:16, 7:20, 11:24, 13:?	4:17, 8:21, 12:25
26	1:14, 5:18, 9:22, 13:26	2:15, 6:19, 10:23	3:16, 7:20, 11:24	4:17, 8:21, 12:25
27	1:15, 5:19, 9:23, 14:?	2:16, 6:20, 10:24	3:17, 7:21, 11:25	4:18, 8:22, 12:26, 13:27
28	1:15, 5:19, 9:23	2:16, 6:20, 10:24, 13:27	3:17, 7:21, 11:25, 14:28	4:18, 8:22, 12:16
29	1:16, 5:20, 9:24, 13:28	2:17, 6:21, 10:25	3:18, 7:22, 11:26, 15:?	4:19, 8:23, 12:27, 14:29
30	1:16, 5:20, 9:24	2:17, 6:21, 10:25, 13:28	3:18, 7:22, 11:26, 14:29	4:19, 8:23, 12:27, 15:30
31	1:17, 5:21, 9:25, 16:?	2:18, 6:22, 10:26, 13:29	3:19, 7:23, 11:27, 14:30	4:20, 8:24, 12:28, 15:31
32	1:17, 5:21, 9:25, 13:29	2:18, 6:22, 10:26, 14:30	3:19, 7:23, 11:27, 15:31	4:20, 8:24, 12:28, 16:32
33	1:18, 5:22, 9:26, 13:30	2:19, 6:23, 10:27, 14:31	3:20, 7:24, 11:28, 15:32, 17:?	4:21, 8:25, 12:29, 16:33
34	1:18, 5:22, 9:26, 13:30, 17:34	2:19, 6:23, 10:27, 14:31	3:20, 7:24, 11:28, 15:32	4:21, 8:25, 12:29, 16:33
35	1:19, 5:23, 9:27, 13:31, 18:?	2:20, 6:24, 10:28, 14:32	3:21, 7:25, 11:29, 15:33	4:22, 8:26, 11:30, 16:34, 17:35
36	1:19, 5:23, 9:27, 13:31	2:20, 6:24, 10:28, 14:32, 17:35	3:21, 7:25, 11:29, 15:33, 18:36	4:22, 8:26, 11:30, 16:34
37	1:20, 5:24, 9:28, 13:32, 17:36	2:21, 5:25, 10:29, 14:33	3:22, 7:26, 11:30, 15:34, 19:?	4:23, 8:27, 11:31, 16:35, 18:37
38	1:20, 5:24, 9:28, 13:32	2:21, 5:25, 10:29, 14:33, 17:36	3:22, 7:26, 11:30, 15:34, 18:37	4:23, 8:27, 11:31, 16:35, 19:38

39	1:21, 5:25, 9:29, 13:33, 20:?	2:22, 5:26, 10:30, 14:34, 17:37	3:23, 7:27, 11:31, 15:35, 18:38	4:24, 8:28, 11:32, 16:36, 19:39
40	1:21, 5:25, 9:29, 13:33, 17:37	2:22, 5:26, 10:30, 14:34, 18:38	3:23, 7:27, 11:31, 15:35, 19:39	4:24, 8:28, 11:32, 16:36, 20:40
41	1:22, 5:26, 9:30, 13:34, 17:38	2:23, 5:27, 10:31, 14:35, 18:39	3:24, 7:28, 11:32, 15:36, 19:40, 21:?	4:25, 8:29, 11:33, 16:37, 20:41
42	1:22, 5:26, 9:30, 13:34, 17:38, 21:42	2:23, 5:27, 10:31, 14:35, 18:39	3:24, 7:28, 11:32, 15:36, 19:40	4:25, 8:29, 11:33, 16:37, 20:41
43	1:23, 5:27, 9:31, 13:35, 17:39, 22:?	2:24, 5:28, 10:32, 14:36, 18:40	3:25, 7:29, 11:33, 15:37, 19:41	4:26, 8:30, 11:34, 16:38, 20:42, 21:43
44	1:23, 5:27, 9:31, 13:35, 17:39	2:24, 5:28, 10:32, 14:36, 18:40, 21:43	3:25, 7:29, 11:33, 15:37, 19:41, 22:44	4:26, 8:30, 11:34, 16:38, 20:42
45	1:24, 5:28, 9:32, 13:36, 17:40, 21:44	2:25, 5:29, 10:33, 14:37, 18:41	3:26, 7:30, 11:34, 15:38, 19:42, 23:?	4:27, 8:31, 11:35, 16:39, 20:43, 22:45
46	1:24, 5:28, 9:32, 13:36, 17:40	2:25, 5:29, 10:33, 14:37, 18:41, 21:44	3:26, 7:30, 11:34, 15:38, 19:42, 22:45	4:27, 8:31, 11:35, 16:39, 20:43, 23:46
47	1:25, 5:29, 9:33, 13:37, 17:41, 24:?	2:26, 5:30, 10:34, 14:38, 18:42, 21:45	3:27, 7:31, 11:35, 15:39, 19:43, 22:46	4:28, 8:32, 11:36, 16:40, 20:44, 23:47
48	1:25, 5:29, 9:33, 13:37, 17:41, 21:45	2:26, 5:30, 10:34, 14:38, 18:42, 22:46	3:27, 7:31, 11:35, 15:39, 19:43, 23:47	4:28, 8:32, 11:36, 16:40, 20:44, 24:48
49	1:26, 5:30, 9:34, 13:38, 17:42, 21:46	2:27, 5:31, 10:35, 14:39, 18:43, 22:47	3:28, 7:32, 11:36, 15:40, 19:44, 23:48, 25:?	4:29, 8:33, 11:37, 16:41, 20:45, 24:49
50	1:26, 5:30, 9:34, 13:38, 17:42, 21:46, 25:50	2:27, 5:31, 10:35, 14:39, 18:43, 22:47	3:28, 7:32, 11:36, 15:40, 19:44, 23:48	4:29, 8:33, 11:37, 16:41, 20:45, 24:49
51	1:27, 5:31, 9:35, 13:39, 17:43, 21:47, 26:?	2:28, 5:32, 10:36, 14:40, 18:44, 22:48	3:29, 7:33, 11:37, 15:41, 19:45, 23:49	4:30, 8:34, 11:38, 16:42, 20:46, 24:50, 25:51
52	1:27, 5:31, 9:35, 13:39, 17:43, 21:47	2:28, 5:32, 10:36, 14:40, 18:44, 22:48, 25:51	3:29, 7:33, 11:37, 15:41, 19:45, 23:49, 26:52	4:30, 8:34, 11:38, 16:42, 20:46, 24:50
53	1:28, 5:32, 9:36, 13:40, 17:44, 21:48, 25:52	2:29, 5:33, 10:37, 14:41, 18:45, 22:49	3:30, 7:34, 11:38, 15:42, 19:46, 23:50, 27:?	4:31, 8:35, 11:39, 16:43, 20:47, 24:51, 26:53
54	1:28, 5:32, 9:36, 13:40, 17:44, 21:48	2:29, 5:33, 10:37, 14:41, 18:45, 22:49, 25:52	3:30, 7:34, 11:38, 15:42, 19:46, 23:50, 26:53	4:31, 8:35, 11:39, 16:43, 20:47, 24:51, 27:54
55	1:29, 5:33, 9:37, 13:41, 17:45, 21:49, 28:?	2:30, 5:34, 10:38, 14:42, 18:46, 22:50, 25:53	3:31, 7:35, 11:39, 15:43, 19:47, 23:51, 26:54	4:32, 8:36, 11:40, 16:44, 20:48, 24:52, 27:55
56	1:29, 5:33, 9:37, 13:41, 17:45, 21:49, 25:53	2:30, 5:34, 10:38, 14:42, 18:46, 22:50, 26:54	3:31, 7:35, 11:39, 15:43, 19:47, 23:51, 27:55	4:32, 8:36, 11:40, 16:44, 20:48, 24:52, 28:56
57	1:30, 5:34, 9:38, 13:42, 17:46, 21:50, 25:54	2:31, 5:35, 10:39, 14:43, 18:47, 22:51, 26:55	3:32, 7:36, 11:40, 15:44, 19:48, 23:52, 27:56, 29:?	4:33, 8:37, 11:41, 16:45, 20:49, 24:53, 28:57
58	1:30, 5:34, 9:38, 13:42, 17:46, 21:50, 25:54, 29:58	2:31, 5:35, 10:39, 14:43, 18:47, 22:51, 26:55	3:32, 7:36, 11:40, 15:44, 19:48, 23:52, 27:56	4:33, 8:37, 11:41, 16:45, 20:49, 24:53, 28:57
59	1:31, 5:35, 9:39, 13:43, 17:47, 21:51, 25:55, 30:?	2:32, 5:36, 10:40, 14:44, 18:48, 22:52, 26:56	3:33, 7:37, 11:41, 15:45, 19:49, 23:53, 27:57	4:34, 8:38, 11:42, 16:46, 20:50, 24:54, 28:58, 29:59
60	1:31, 5:35, 9:39, 13:43, 17:47, 21:51, 25:55	2:32, 5:36, 10:40, 14:44, 18:48, 22:52, 26:56, 29:59	3:33, 7:37, 11:41, 15:45, 19:49, 23:53, 27:57, 30:60	4:34, 8:38, 11:42, 16:46, 20:50, 24:54, 28:58